

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	brantigan\$.in. and "623"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 09:34
L2	1363	spacer with bone	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 09:35
L3	0	spacer with bone and "623"/\$.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 09:36
L4	462	spacer with bone and "623"/\$\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 09:47
L5	284	compress\$3 with anchor with bone	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 09:57
L6	7	expand\$3 near3 diameter with anchor with bone	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 10:00
L7	10	expand\$3 near3 diameter with anchor same bone	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 10:00
L8	29	expand\$3 near3 diameter with anchor same (bone or tissue)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2004/12/10 10:05
L9	182	(606/63).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/10 10:05

File Edit View Tools Window Help

Document ID	Kind	Code	Source	Issue Date	Pages	Image
1	US 3598026 A		USPAT	19710810		
2	US 3613497 A		USPAT	19711019	4	US 3613497
3	US 3676836 A		USPAT	19720711	12	US 3676836
4	US 3675283 A		USPAT	19720711	4	US 3675283
5	US 3678633 A		USPAT	19720725	4	US 3678633
6	US 3713191 A		USPAT	19730130	4	US 3713191
7	US 3721463 A		USPAT	19730320	6	US 3721463
8	US 3874264 A		USPAT	19750401	7	US 3874264
9	US 3878867 A		USPAT	19750422	6	US 3878867
10	US 3922947 A		USPAT	19751202	6	US 3922947
11	US 3952656 A		USPAT	19760427	12	US 3952656
12	US 3978892 A		USPAT	19760907	8	US 3978892
13	US 3986366 A		USPAT	19761019	4	US 3986366
14	US 3994138 A		USPAT	19761130	7	US 3994138
15	US 4068668 A		USPAT	19780117	5	US 4068668
16	US 4096673 A		USPAT	19780627	6	US 4096673
17	US 4160575 A		USPAT	19790710	11	US 4160575
18	US 4195547 A		USPAT	19800401	9	US 4195547
19	US 4197781 A		USPAT	19800415	8	US 4197781
20	US 4227235 A		USPAT	19801007	5	US 4227235
21	US 4233764 A		USPAT	19801118	5	US 4233764
22	DE 2922877 A		DERWEN	19801218		
23	US 4274324 A		USPAT	19810623		
24	US 4284379 A		USPAT	19810818		
25	US 4290755 A		USPAT	19810922		
26	GB 2090360 A		EPO	19820707		
27	US 4343567 A		USPAT	19820810		
28	DE 3226592 A		DERWEN	19840119		
29	JP 59037517 A		JPO	19840301		
30	US 4445318 A		USPAT	19840501		
31	US 4464826 A		USPAT	19840814		
32	US 4472088 A		USPAT	19840918		
33	US 4537821 A		USPAT	19850827		
34	FR 2561460 A		DERWEN	19850920		
35	US 4546987 A		USPAT	19851015		
36	US 4618325 A		USPAT	19861021		
37	SU 1275136 A		DERWEN	19861207		
38	US 4627563 A		USPAT	19861209		
39	US 4632671 A		USPAT	19861230		
40	US 4632671 A		DERWEN	19861230		
41	DE 3538145 A		DERWEN	19870430		
42	US 4693308 A		USPAT	19870915		
43	US RE32645 E		USPAT	19880412		

US-PAT-NO: 3613497  
 DOCUMENT-IDENTIFIER: US 3613497 A  
 TITLE: EXPANSION ANCHOR

Heldermann

----- KWIC -----  
 Application Filing Date - AD (1):  
 19650410

Detailed Description Text - DETX (5):  
 Expansion anchor 10 is used by inserting it into a hole in a wall and securing a member by means of screws 28, the anchor expanding against the side of the hole. If the hole is of substantially the same diameter as the outside diameter without ribs 24 of body portion 14 the unique advantage of the present invention will be utilized most advantageously. The outside diameter of body portion 14 including ribs 24 being larger than the diameter of the hole in the wall, body portion 14 will be compressed radially inwardly at each rib 24 or forced insertion of the anchor into the hole. Because of the asymmetrical location of ribs 24 as above described, collapse of the anchor will be similarly asymmetric and will result in the inward twisting of each leg 22 as may clearly be seen in FIG. 7. Corresponding to each rib 24 there will be formed inwardly and longitudinally of bore 26 a spline 30 which is an inner edge of each leg 22. A screw entering bore 26 will first engage its threads with splines 30 for quicker, surer, and otherwise improved holding power. The initial bite provided by splines 30 for the threads of the screw is not to be found in any known prior device of the kind.

See Col. 3, 059-29

File Edit View Tools Window Help

Document ID	Kind	Code	Source	Itemno	Date	Pages	Image
1	US	3598026 A	USPAT	19710810			
2	US	3613497 A	USPAT	19711019	4	US 3613	
3	US	3676836 A	USPAT	19720711	12	US 3676	
4	US	3675283 A	USPAT	19720711	4	US 3675	
5	US	3678633 A	USPAT	19720725	4	US 3678	
6	US	3713191 A	USPAT	19730130	4	US 3713	
7	US	3721463 A	USPAT	19730320	6	US 3721	
8	US	3874264 A	USPAT	19750401	7	US 3874	
9	US	3878867 A	USPAT	19750422	6	US 3878	
10	US	3922947 A	USPAT	19751202	6	US 3922	
11	US	3952656 A	USPAT	19760427	12	US 3952	
12	US	3978892 A	USPAT	19760907	8	US 3978	
13	US	3986366 A	USPAT	19761019	4	US 3986	
14	US	3994138 A	USPAT	19761130	7	US 3994	
15	US	4068668 A	USPAT	19780117	5	US 4068	
16	US	4096673 A	USPAT	19780627	6	US 4096	
17	US	4160575 A	USPAT	19790710	11	US 4160	
18	US	4195547 A	USPAT	19800401	9	US 4195	
19	US	4197781 A	USPAT	19800415	8	US 4197	
20	US	4227235 A	USPAT	19801007	5	US 4227	
21	US	4233764 A	USPAT	19801118	5	US 4233	
22	DE	2922677 A	DERWEN	19801218	24	DE 2922	
23	US	4274324 A	USPAT	19810623	8	US 4274	
24	US	4284379 A	USPAT	19810818	4	US 4284	
25	US	4290755 A	USPAT	19810922	5	US 4290	
26	GB	2090360 A	EPO	19820707	5	GB 2090	
27	US	4343567 A	USPAT	19820810			
28	DE	3226592 A	DERWEN	19840119			
29	JP	59037517 A	JPO	19840301			
30	US	4445318 A	USPAT	19840501			
31	US	4464826 A	USPAT	19840814			
32	US	4472068 A	USPAT	19840918			
33	US	4537821 A	USPAT	19850827			
34	FR	2561460 A	DERWEN	19850920			
35	US	4546987 A	USPAT	19851015			
36	US	4618325 A	USPAT	19861021			
37	SU	1275136 A	DERWEN	19861207			
38	US	4627563 A	USPAT	19861209			
39	US	4632671 A	USPAT	19861230			
40	US	4632671 A	DERWEN	19861230			
41	DE	3538145 A	DERWEN	19870430			
42	US	4693308 A	USPAT	19870915			
43	US	RE32645 E	USPAT	19880412			

PUB-NO: GB002090360A

DOCUMENT-IDENTIFIER: GB 2090360 A

TITLE: Eyebolt anchors

PUBN-DATE: July 7, 1982

## ASSIGNEE-INFORMATION:

NAME PHILLIPS DRILL CO UK LTD COUNTRY N/A

APPL-NO: GB08035344

APPL-DATE: December 30, 1980

PRIORITY-DATA: GB08035344A ( December 30, 1980)

INT-CL (IPC): F16B013/06

EUR-CL (EPC): F16B013/06 ; F16B013/08

US-CL-CURRENT: 411/55

## ABSTRACT:

An eyebolt anchor comprises a bolt 1 which carries a resilient sleeve 4, and rigid sleeve 6 and an eye-ring 7 which is threaded on the end 2 of the bolt. The anchor is inserted into a hole 10 in wall 11 and the eye-ring is screwed up against the rigid sleeve to ~~compress~~ and expand the resilient sleeve 4. When the anchor is no longer required the eye-ring is unscrewed to remove the compressive pressure on the resilient sleeve and the anchor can then be withdrawn from the hole. In a modification, a nut may be threaded on the bolt between the eye-ring and rigid sleeve. <IMAGE>

File Edit View Tools Window Help

Document ID	Kind	Code	Source	Issue Date	Pages	Image D
15	US 4068668 A		USPAT	19780117	5	US 4068
16	US 4096673 A		USPAT	19780627	6	US 4096
17	US 4160575 A		USPAT	19790710	11	US 4160
18	US 4195547 A		USPAT	19800401	9	US 4195
19	US 4197781 A		USPAT	19800415	8	US 4197
20	US 4227235 A		USPAT	19801007	5	US 4227
21	US 4233764 A		USPAT	19801118	5	US 4233
22	DE 2922877 A		DERWEN	19801218	24	DE 2922
23	US 4274324 A		USPAT	19810623	8	US 4274
24	US 4284379 A		USPAT	19810818	4	US 4284
25	US 4290755 A		USPAT	19810922	5	US 4290
26	GB 2090360 A		EPO	19820707	5	GB 2090
27	US 4343567 A		USPAT	19820810	7	US 4343
28	DE 3226592 A		DERWEN	19840119	12	DE 3226
29	JP 59037517 A		JPO	19840301	NA	
30	US 4445318 A		USPAT	19840501	8	US 4445
31	US 4464826 A		USPAT	19840814	21	US 4464
32	US 4472088 A		USPAT	19840918	5	US 4472
33	US 4537621 A		USPAT	19850827	4	US 4537
34	FR 2561460 A		DERWEN	19850920	8	FR 2561
35	US 4546987 A		USPAT	19851015	8	US 4546
36	US 4618325 A		USPAT	19861021	6	US 4618
37	SU 1275136 A		DERWEN	19861207	NA	
38	US 4627563 A		USPAT	19861209	8	US 4627
39	US 4632671 A		USPAT	19861230	6	US 4632
40	US 4632671 A		DERWEN	19861230	6	US 4632
41	DE 3538145 A	A1, C2	DERWEN	19870430	6	DE 3538
42	US 4693308 A		USPAT	19870915	7	US 4693
43	US RE32645 E		USPAT	19880412	9	US RE32
44	US 4753561 A		USPAT	19880628	5	US 4753
45	US 4753561 A		DERWEN	19880628	5	US 4753
46	US 4768278 A		USPAT	19880906	15	US 4768
47	US 4779766 A		USPAT	19881025	12	US 4779
48	US 4795294 A		USPAT	19890103	23	US 4795
49	EP 298591 A1	A1, B1	EPO	19890111	10	EP 2985
50	US 4817356 A		USPAT	19890404	19	US 4817
51	US 4828439 A		USPAT	19890509	9	US 4828
52	US 4865489 A		USPAT	19890912	9	US 4865
53	US 4874128 A		USPAT	19891017	21	US 4874
54	US 4881305 A		USPAT	19891121	7	US 4881
55	US 4890779 A		USPAT	19900102	8	US 4890
56	DD 276704 A		DERWEN	19900307	NA	
57	US 4943183 A		USPAT	19900724		

DERWENT-ACC-NO: 1990-247337

DERWENT-WEEK: 199033

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TITLE: Method of increasing bearing capacity of split anchors - involves boring undersized hole to take resin cartridge and driving in split anchor

INVENTOR: ORLOB, L; RIEMER, P

PATENT-ASSIGNEE: SDAG WISMUT[SDAGN]

PRIORITY-DATA: 1988DD-0321534 (November 7, 1988)

PATENT-FAMILY:

PUB-NO DD 276704 A PUB-DATE March 7, 1990 LANGUAGE N/A PAGES 000 MAIN-IPC N/A

APPLICATION-DATA:

PUB-NO DD 276704A APPL-DESCRIPTOR N/A APPL-NO 1988DD-0321534 APPL-DATE November 7, 1988

INT-CL (IPC): E21D021/02

ABSTRACTED-PUB-NO: DD 276704A

BASIC-ABSTRACT:

The method increases the bearing capacity of split anchors in rock with self hardening compound. A synthetic resin cartridge is first inserted in a known undersized hole and then the split anchor driven in. The thin walls of the split anchor are compressed by the undersized hole so that the splits close up.

USE/ADVANTAGE - The compression of the split anchor by the undersized hole sets up an immediate strong bonding.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: METHOD INCREASE BEARING CAPACITY SPLIT ANCHOR BORE UNDERSIZE HOLE RESIN CARTRIDGE DRIVE SPLIT ANCHOR

DERWENT-CLASS: Q49

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1990-192047

	Document ID	Kind	Code	Source	Issue Date	Pages	Image
1	US 3598026 A			USPAT	19710810		
2	US 3613497 A			USPAT	19711019	4	US 3613
3	US 3676836 A			USPAT	19720711	12	US 3676
4	US 3675283 A			USPAT	19720711	4	US 3675
5	US 3678633 A			USPAT	19720725	4	US 3678
6	US 3713191 A			USPAT	19730130	4	US 3713
7	US 3721463 A			USPAT	19730320	6	US 3721
8	US 3874264 A			USPAT	19750401	7	US 3874
9	US 3878867 A			USPAT	19750422	6	US 3878
10	US 3922947 A			USPAT	19751202	6	US 3922
11	US 3952656 A			USPAT	19760427	12	US 3952
12	US 3978892 A			USPAT	19760907	8	US 3978
13	US 3986366 A			USPAT	19761019	4	US 3986
14	US 3994130 A			USPAT	19761130	7	US 3994
15	US 4068668 A			USPAT	19780117	5	US 4068
16	US 4096673 A			USPAT	19780627	6	US 4096
17	US 4160575 A			USPAT	19790710	11	US 4160
18	US 4195547 A			USPAT	19800401	9	US 4195
19	US 4197781 A			USPAT	19800415	8	US 4197
20	US 4227235 A			USPAT	19801007	5	US 4227
21	US 4233764 A			USPAT	19801118	5	US 4233
22	DE 2922877 A			DERWEN	19801218	24	DE 2922
23	US 4274324 A			USPAT	19810623	8	US 4274
24	US 4284379 A			USPAT	19810818	4	US 4284
25	US 4290755 A			USPAT	19810922	5	US 4290
26	GB 2090360 A			EPO	19820707	5	GB 2090
27	US 4343567 A			USPAT	19820810	7	US 4343
28	DE 3226592 A			DERWEN	19840119	12	DE 3226
29	JP 59037517 A			JPO	19840301	NA	
30	US 4445318 A			USPAT	19840501	8	US 4445
31	US 4464826 A			USPAT	19840814	21	US 4464
32	US 4472088 A			USPAT	19840918	5	US 4472
33	US 4537821 A			USPAT	19850827	4	US 4537
34	FR 2561460 A			DERWEN	19850920	6	FR 2561
35	US 4546987 A			USPAT	19851015	8	US 4546
36	US 4618325 A			USPAT	19861021	6	US 4618
37	SU 1275136 A			DERWEN	19861207	NA	
38	US 4627563 A			USPAT	19861209		
39	US 4632671 A			USPAT	19861230		
40	US 4632671 A			DERWEN	19861230		
41	DE 3538145 A			DERWEN	19870430		
42	US 4693308 A			USPAT	19870915		
43	US RE32645 E			USPAT	19880412		

DERWENT-ACC-NO: 1987-220387

DERWENT-WEEK: 198731

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Belov et al

TITLE: Expanding anchor fixing - has sleeve made with convex slotted end expanded by stopper with cylindrical and conical surfaces

INVENTOR: ALEKSEENKO, P P; BELOV, A V ; USHAKOV, N V

PATENT-ASSIGNEE: ASSEMB SPEC CONS[ASER]

PRIORITY-DATA: 1985SU-3843531 (January 16, 1985)

## PATENT-FAMILY:

PUB-NO PUB-DATE LANGUAGE PAGES MAIN-IPC  
SU 1275136 A December 7, 1986 N/A 000 N/A

## APPLICATION-DATA:

PUB-NO APPL-DESCRIPTOR APPL-NO APPL-DATE  
SU 1275136A N/A 1985SU-3843531 January 16, 1985

INT-CL (IPC): F16B013/06

ABSTRACTED-PUB-NO: SU 1275136A

## BASIC-ABSTRACT:

The fixing consists of a sleeve with an inner thread at one end and lengthwise slots at the other, and a stopper to expand the slotted end. The outer surface of the sleeve is convex in shape at the slotted end, with its diameter exceeding the outer diameter of the sleeve at the point where it is threaded, and its inner surface has an end recess, cylindrical in shape and less than half the length of the stopper, and conical tips.

The slotted end of the sleeve is compressed when inserted in the anchor hole until the stopper with two conical (3,4) and one cylindrical surface (5) is driven into it. The stopper expands the slotted end of the sleeve, fixing it into the hole so that the threaded end can be used for an anchor bolt.

ADVANTAGE - Increased load-bearing capacity. Bul.45/7.12.86

TITLE-TERMS: EXPAND ANCHOR FIX SLEEVE MADE CONVEX SLOT END EXPAND STOPPER CYLINDER CONICAL SURFACE

DERWENT-CLASS: Q61

## SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1987-164906

	Document ID	Kind	Code	Source	Issue Date	Pages	Image
1	US 3598026 A			USPAT	19710810		
2	US 3613497 A			USPAT	19711019	4	US 3613
3	US 3676836 A			USPAT	19720711	12	US 3676
4	US 3675283 A			USPAT	19720711	4	US 3675
5	US 3678633 A			USPAT	19720725	4	US 3678
6	US 3713191 A			USPAT	19730130	4	US 3713
7	US 3721463 A			USPAT	19730320	6	US 3721
8	US 3874264 A			USPAT	19750402	7	US 3874
9	US 3878867 A			USPAT	19750422	6	US 3878
10	US 3922947 A			USPAT	19751202	6	US 3922
11	US 3952656 A			USPAT	19760427	12	US 3952
12	US 3978892 A			USPAT	19760907	8	US 3978
13	US 3986366 A			USPAT	19761019	4	US 3986
14	US 3994138 A			USPAT	19761130	7	US 3994
15	US 4068668 A			USPAT	19780117	5	US 4068
16	US 4096673 A			USPAT	19780627	6	US 4096
17	US 4160575 A			USPAT	19790710	11	US 4160
18	US 4195547 A			USPAT	19800401	9	US 4195
19	US 4197781 A			USPAT	19800415	8	US 4197
20	US 4227235 A			USPAT	19801007	5	US 4227
21	US 4233764 A			USPAT	19801118	5	US 4233
22	DE 2922877 A			DERWEN	19801218		
23	US 4274324 A			USPAT	19810623		
24	US 4284379 A			USPAT	19810818		
25	US 4290755 A			USPAT	19810922		
26	GB 2090360 A			EPO	19820707		
27	US 4343567 A			USPAT	19820810		
28	DE 3226592 A			DERWEN	19840119		
29	JP 59037517 A			JPO	19840301		
30	US 4445318 A			USPAT	19840501		
31	US 4464826 A			USPAT	19840814		
32	US 4472088 A			USPAT	19840918		
33	US 4537821 A			USPAT	19850827		
34	FR 2561460 A			DERWEN	19850920		
35	US 4546987 A			USPAT	19851015		
36	US 4618325 A			USPAT	19861021		
37	SU 1275136 A			DERWEN	19861207		
38	US 4627563 A			USPAT	19861209		
39	US 4632671 A			USPAT	19861230		
40	US 4632671 A			DERWEN	19861230		
41	DE 3538145 A			DERWEN	19870430		
42	US 4693308 A			USPAT	19870915		
43	US RE32645 E			USPAT	19880412		

US-PAT-NO: 3874264  
 DOCUMENT-IDENTIFIER: US 3874264 A  
 TITLE: Anchor bolt assembly

----- KWIC -----  
 Application Filing Date - AD (1):  
 19830316

Brief Summary Text - ESTX (3):  
 Briefly described, the anchor plug of the assembly comprises a tubular body having a cylindrical portion and a bulb-shaped portion with a diameter slightly larger than that of the cylindrical portion. Both the cylindrical portion and the bulb portion are longitudinally slotted to permit radial expansion and contraction by a bolt inserted into the threaded bore of the cylindrical body. In use, the anchor plug is inserted into a predrilled hole having a diameter equal to that of the cylindrical body portion, the bulb portion being compressed by the sides of the hole sufficiently to maintain its position as desired and to secure it against rotation while a threaded bolt having an expansion means thereon is inserted therein. As the bolt progresses through the bore of the plug, a lower plug element on the bolt initially expands the bulb section of the plug to assist in preventing rotation of the plug as the insertion of the bolt continues. Continued engagement of the expansion means in the bolt with the upper cylindrical portion of the plug expands the portions of the cylindrical section intermediate the longitudinal slots into a spreaded wing formation which bites into the walls of the concrete hole to make a secure connection therewith. Once the plug is expanded in this manner, the bolt can be withdrawn in a conventional fashion leaving the plug firmly imbedded within the hole.

Polo's  
 See Col. 1 pl. 5 31-56

Document ID	Kind	Code	Source	Issue Date	Pages	Image
1	US 1395122 A		USOCR	19211025	10	US 1395
2	US 2621979 A		USOCR	19580204	4	US 2621
3	US 3244170 A		USOCR	19660405	7	US 3244
4	US 3489143 A		USOCR	19700113	3	US 3489
5	US 3709218 A		USPAT	19730109	8	US 3709
6	US 3866607 A		USPAT	19750218	8	US 3866
7	US 4095591 A		DERWEN	19780620	8	US 4095
8	US 4462402 A		USPAT	19840731	11	US 4462
9	US 4462401 A		USPAT	19840731	11	US 4462
10	US 4487210 A		USPAT	19841211	11	US 4487
11	US 4530355 A		USPAT	19850723	9	US 4530
12	US 4571178 A		USPAT	19860218	8	US 4571
13	US 4616638 A		USPAT	19861014	9	US 4616
14	US 4617922 A		USPAT	19861021	9	US 4617
15	US 4632101 A		USPAT	19861230	10	US 4632
16	US 4641640 A		USPAT	19870210	9	US 4641
17	US 4644943 A		USPAT	19870224	10	US 4644
18	EP 303467 A2	A2, A3	EPO	19890215	5	EP 3034
19	EP 303467 A	A2, A3	DERWEN	19890215	5	EP 3034
20	US 4840632 A		USPAT	19890620	13	US 4840
21	US 4840632 A		DERWEN	19890620	13	US 4840
22	EP 377401 A		DERWEN	19900711	5	EP 3774
23	US 5037422 A		USPAT	19910606	6	US 5037
24	US 5098433 A		USPAT	19920324		
25	US 5116336 A		USPAT	19920526		
26	US 5180383 A		USPAT	19930119		
27	US 5224946 A		USPAT	19930706		
28	US 5306275 A		USPAT	19940426		
29	US 5312438 A		USPAT	19940517		
30	US 5336225 A		USPAT	19940809		
31	US 5338197 A		USPAT	19940816		
32	US 5356413 A		USPAT	19941018		
33	US 5372599 A		USPAT	19941213		
34	DE 4321785 C1		EPO	19950330		
35	US 5411522 A		USPAT	19950502		
36	US 5423850 A		USPAT	19950613		
37	US 5443466 A		USPAT	19950822		
38	US 5466237 A		USPAT	19951114		
39	US 5466237 A		DERWEN	19951114		
40	US 5472452 A		USPAT	19951205		
41	US 5472452 A		DERWEN	19951205		
42	US 5474555 A		USPAT	19951212		
43	US 5480437 A		USPAT	19960102		

US-PAT-NO: 5037422

DOCUMENT-IDENTIFIER: US 5037422 A

TITLE: Bone anchor and method of anchoring a suture to a bone

## ----- KWIC -----

## Detailed Description Text - DETX (6):

As shown schemmatically in FIG. 4, when tension is applied to the strand 22, the suture receiving opening 24 shown diagrammatically is displaced upwardly a distance X. This upward movement causes the edges 34 to scissor outwardly from an insertion position at a diameter A to an installed position shown by diameter B. Expansion of the bone anchor is shown in FIG. 5 in a top plan view with the bone anchor expanding from a diameter A to a diameter B. Diameter A corresponds to the compressed dimension of the bone anchor while diameter B corresponds to the outwardly scissored dimension or expanded dimension.

## Claims Text - CLTX (18):

14. The suture of claim 13 wherein two resilient walls are provided which are compressed together when the suture anchor is inserted into the hole in the bone, said two walls being separated by first and second longitudinal slots that extend from the tip to a trailing end of the body.

## Claims Text - CLTX (32):

25. The method of claim 22 wherein two resilient walls are provided which are separated by first and second longitudinal slots that extend from the tip to a trailing end of the body said method further comprising compressing said two walls together when the suture anchor is inserted into the hole in the bone.

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Document ID	Kind	Code	Source	Issue Date	Pages	Image No.	
1	US	2785673	A	USOCR	19570319	9	US 2785
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4	US	4164793	A	USPAT	19790821	8	US 4164
5	US	4198712	A	USPAT	19800422	10	US 4198
6	US	4292694	A	USPAT	19811006	5	US 4292
7	US	4314381	A	USPAT	19820209	9	US 4314
8	US	4338926	A	USPAT	19820713	6	US 4338
9	US	4437193	A	USPAT	19840320	7	US 4437
10	US	4446579	A	USPAT	19840508	10	US 4446
11	US	4446578	A	USPAT	19840508	4	US 4446
12	US	4451568	A	USPAT	19840529	12	US 4451
13	US	4563778	A	USPAT	19860114	8	US 4563
14	US	4566138	A	USPAT	19860128	7	US 4566
15	US	4584722	A	USPAT	19860429	6	US 4584
16	US	4623352	A	USPAT	19861118	9	US 4623
17	US	4634445	A	USPAT	19870106	3	US 4634
18	US	4645505	A	USPAT	19870224	7	US 4645
19	US	4731087	A	USPAT	19880315	6	US 4731
20	US	4731086	A	USPAT	19880315	6	US 4731
21	US	4753657	A	USPAT	19880628	6	US 4753
22	US	4795472	A	USPAT	19890103	5	US 4795
23	US	4828562	A	USPAT	19890509	8	US 4828
24	US	4883490	A	USPAT	19891128	10	US 4883
25	US	4936860	A	USPAT	19900626	6	US 4936
26	US	4944757	A	USPAT	19900731	7	US 4944
27	US	4955915	A	USPAT	19900911		
28	US	4955325	A	USPAT	19900911		
29	US	4969908	A	USPAT	19901113		
30	US	4988359	A	USPAT	19910129		
31	US	5009665	A	USPAT	19910423		
32	US	5037440	A	USPAT	19910806		
33	US	5047058	A	USPAT	19910910		
34	US	5080679	A	USPAT	19920114		
35	US	5108441	A	USPAT	19920428		
36	US	5108437	A	USPAT	19920428		
37	US	5108435	A	USPAT	19920428		
38	US	5116380	A	USPAT	19920526		
39	US	5116377	A	USPAT	19920526		
40	US	5133772	A	USPAT	19920728		
41	US	5163963	A	USPAT	19921117		
42	US	5171281	A	USPAT	19921215		
43	US	5207712	A	USPAT	19930504		

US-PAT-NO: 4198712

DOCUMENT-IDENTIFIER: US 4198712 A

\*\*See image for Certificate of Correction\*\*

TITLE: Scaphoid implant

## ----- KWIC -----

## Brief Summary Text - BSTX (5):

Due to these shortcomings of such prior operative procedures, intramedullary stemmed silicone rubber implants have been developed to replace the scaphoid bone and the lunate bone of the carpal row. These implants were designed to act as articulating spacers capable of maintaining the relationship of adjacent carpal bones after excision of the lunate or scaphoid bone while preserving mobility of the wrist. Examples of such prior carpal bone implants may be found in Applicant's work entitled "Flexible Implant Resection Arthroplasty On The Hand And Extremities", 1973 by the C. V. Mosby Company. Also, an example of an improved lunate implant may be found in Applicant's copending application, Ser. No. 900,180, entitled LUNATE IMPLANT, and filed Apr. 26, 1978.

## Current US Original Classification - CCOR (1):

623721W14

	Document ID	Kind	Code	Source	Issue Date	Pages	Image
1	US 2785673 A			USOCR	19570319	9	US 2785
2	US 3528109 A			USOCR	19700915	3	US 3528
3	US 3793650 A			USPAT	19740226	3	US 3793
4	US 4164793 A			USPAT	19790821	8	US 4164
5	US 4198712 A			USPAT	19800422	10	US 4198
6	US 4292694 A			USPAT	19811006	5	US 429
7	US 4314361 A			USPAT	19820209	9	US 4314
8	US 4338926 A			USPAT	19820713	6	US 4338
9	US 4437193 A			USPAT	19840320	7	US 4437
10	US 4446579 A			USPAT	19840508	10	US 4446
11	US 4446578 A			USPAT	19840508	4	US 4446
12	US 4451568 A			USPAT	19840529	12	US 4451
13	US 4563778 A			USPAT	19860114	8	US 4563
14	US 4566138 A			USPAT	19860128	7	US 4566
15	US 4584722 A			USPAT	19860429	6	US 4584
16	US 4623352 A			USPAT	19861118	9	US 4623
17	US 4634445 A			USPAT	19870106	3	US 4634
18	US 4645505 A			USPAT	19870224	7	US 4645
19	US 4731087 A			USPAT	19880315	6	US 4731
20	US 4731086 A			USPAT	19880315	6	US 4731
21	US 4753657 A			USPAT	19880628	6	US 4753
22	US 4795472 A			USPAT	19890103	5	US 4795
23	US 4828562 A			USPAT	19890509	8	US 4828
24	US 4883490 A			USPAT	19891128	10	US 4883
25	US 4936860 A			USPAT	19900626	6	US 4936
26	US 4944757 A			USPAT	19900731	7	US 4944
27	US 4955915 A			USPAT	19900911		
28	US 4955325 A			USPAT	19900911		
29	US 4969908 A			USPAT	19901113		
30	US 4988359 A			USPAT	19910129		
31	US 5009665 A			USPAT	19910423		
32	US 5037440 A			USPAT	19910806		
33	US 5047058 A			USPAT	19910910		
34	US 5080679 A			USPAT	19920114		
35	US 5108441 A			USPAT	19920428		
36	US 5108437 A			USPAT	19920428		
37	US 5108435 A			USPAT	19920428		
38	US 5116380 A			USPAT	19920526		
39	US 5116377 A			USPAT	19920526		
40	US 5133772 A			USPAT	19920728		
41	US 5163963 A			USPAT	19921117		
42	US 5171281 A			USPAT	19921215		
43	US 5207712 A			USPAT	19930504		

US-PAT-NO: 4292694

DOCUMENT-IDENTIFIER: US 4292694 A

TITLE: Prostheses anchoring means

## ----- KWIC -----

## Detailed Description Text - DETX (2):

Referring now to FIGS. 1 and 2, one embodiment of the securing means of the subject invention labelled generally with the reference 13, is shown supporting a tibial plateau prosthesis 15 within the medullary canal 17 of the tibia 19. It should be understood that the securing means shown herein may be utilized with a variety of other joint prostheses including those for replacement of the hip, wrist, elbow and ankle, and the tibial plateau prosthesis 15 is used herein only for purposes of discussion and illustration. The prosthesis securing means 13 includes a plurality of circumferential elastomeric rings 21 attached at spaced intervals along the length of tibial plateau prosthesis 15. Spacers 23, formed of a rigid biocompatible material, are attached at spaced intervals about the elastomeric rings 23 and extend radially outwardly. Four spacers 23 are shown in this embodiment, but it should be understood that as few as three spacers 23 may be used and more than four spacers 23 would also be acceptable. The elastomeric rings may be bonded to the spacers 23 by vulcanization, adhesive coatings or any other suitable means. Spacers 23 are formed of titanium, cobalt-chrome, stainless steel or a polymeric material, and are preferably treated in a known manner to produce a surface porosity of at least 45 microns for acceptance of bone and tissue ingrowth.

## Current US Original Classification - CCOR (1):

B28W33/46

	Document ID	Kind	Code	Source	Issue Date	Pages	Image No.
1	US 2785673 A			USOCR	19570319	9	US 2785
2	US 3528109 A			USOCR	19700915	3	US 3528
3	US 3793650 A			USPAT	19740226	3	US 3793
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6	US 4292694 A			USPAT	19811006	5	US 4292
7	US 4314381 A			USPAT	19820209	9	US 4314
8	US 4338926 A			USPAT	19820713	6	US 4338
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29	US 4969908 A			USPAT	19901113		
30	US 4988359 A			USPAT	19910129		
31	US 5009665 A			USPAT	19910423		
32	US 5037440 A			USPAT	19910606		
33	US 5047058 A			USPAT	19910910		
34	US 5080679 A			USPAT	19920114		
35	US 5108441 A			USPAT	19920428		
36	US 5108437 A			USPAT	19920428		
37	US 5108435 A			USPAT	19920428		
38	US 5116380 A			USPAT	19920526		
39	US 5116377 A			USPAT	19920526		
40	US 5133772 A			USPAT	19920728		
41	US 5163963 A			USPAT	19921117		
42	US 5171281 A			USPAT	19921215		
43	US 5207712 A			USPAT	19930504		

US-PAT-NO: 4338926

DOCUMENT-IDENTIFIER: US 4338926 A

TITLE: Bone fracture prosthesis with controlled stiffness

## ----- KWIC -----

## Drawing Description Text - DRTX (5):

FIG. 2 is a front sectional view of a second embodiment of the invention, a bone plate provided with a plurality of biologically absorbable spacers;

## Claims Text - CLTX (12):

9. A bone prosthesis for use in healing a bone fracture comprising a strong, rigid, biologically non-absorbable metallic structural member and a biologically absorbable, biodegradable synthetic polymeric element adapted to be held under compression between said structural member and said bone when said prosthesis is secured to said bone so that stress is transmitted from said bone through said element to said structural member, with said structural member being a bone plate adapted to be secured to said bone by means comprising two bone screws each adapted to be fitted through an aperture in said plate, and with said element being a spacer held between said plate, said bone and said two screws,

## Current US Cross Reference Classification - CCXR

(2): 603/263.01